

## THE ZOOEOGRAPHIC DISTRIBUTION OF KNOWN SCENOPINIDAE (Diptera)<sup>1</sup>

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A great deal of progress has been made toward the identification and classification of Scenopinidae since I first began work on the family a little over 10 years ago, illustrating the terminalia of all type specimens described to that time. When all proven synonymies were disposed of, a residue of 92 species remained as the core of the known described species. Included in this are three species which, I believe, are undoubtedly synonyms but were retained because the types were unobtainable for study. There are three species described by Loew and three described by Becker, from Persia, Iran and the U.S.S.R., which have never been figured in any way, and must be presumed to be lost, as Kröber who figured the heads and wings of most known species, did not figure them either. At the present time there are 300 known species in 18 genera and four subgenera published or in press, Table 1.

### Regional Distribution

The Palearctic region is only represented by species from the European and Mediterranean portions of the region—no representatives of the family have been seen which come from east

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of this area although the six species mentioned above were taken from the southwestern portion of this area. It is hardly conceivable that no Scenopinids exist in this vast land mass.

The Nearctic has the largest representation of described species and is probably more nearly complete than any other geographic region, however even here new species are continually being found. There are now 139 described species in five genera and two subgenera.

The Neotropical Region though well represented by genera is but poorly represented by species having but 22 in six genera and two subgenera. I fully expect that many more species will be discovered, particularly as the dryer more arid portions of this continent are collected.

The Ethiopian Region, much like other areas of the world, is underrepresented as far as Scenopinids are concerned. At present there are 39 species from five genera and three subgenera from this vast area which shows evidence of being near the ancestral home of the family.

The Oriental Region with only 10 known species in three genera is the most poorly represented of all. Examination of the smaller flies in unidentified portions of collections from this area should turn up many specimens from this family. The only example of serious collecting revealed that the fauna is both rich and varied.

The Australian fauna is shaping up nicely with 55 species in seven genera and one subgenus. This continent appears to be a rich haven for Scenopinids with clear evidence of trans-anarctic ties to South America and Africa. Its more arid climate makes it an ideal habitat for these flies who seem to favor dryer areas, however, the more humid areas have also yielded numerous examples.

### **Distribution of Genera**

The genus *Scenopinus* with 148 species contains nearly half of the known Scenopinids. The genus was so large that it was broken down into four, rather clearly defined, sub-groups with more or less distinct geographical distribution.

The *Fenestralis* group (male with 9th tergum comprised of four

lobes) is primarily Palearctic in distribution with an extension into the Nearctic from Siberia. There are remnants or intrusions into the Ethiopian and Oriental regions as well. All regions of the world with major trade connections have populations of *S. fenestralis* and *S. glabrifrons* which have been introduced with trade goods.

The Albicinctus group (males with a bilobed 9th tergum which does not enclose the genitalia from view) is common to the Australian and Ethiopian regions with extensions along the North Africa coast of the Mediterranean into the Palearctic and eastward into the Oriental region where it may be more prevalent than indicated by present collecting. It is missing from the Nearctic and Neotropical regions.

The Brevicornis group (males with 9th tergum closed basally but open distally to expose genitalia) is primarily Ethiopian in its distribution with a spilling over into the southern limits of the Palearctic where the two regions abut. There is evidence that this group may also occur in the Oriental region as well.

The Velutinus group (males with 9th tergum bilobed covering genitalia) is limited in its distribution to the Nearctic and Neotropical regions with an extension into the Pacific islands.

The genus *Metatrichia* is the only other genus with world-wide distribution, with representatives known from all but the Palearctic region, at the present time.

The remaining genera are for the most part distinct to their own regions, however there is some sharing of regions by three genera namely the Nearctic *Brevitrichia* and *Pseudatrichia* with Neotropical species and the Ethiopian-Oriental distribution of the genus *Seguyella*.

The early development of this family is evidenced by the circum Antarctic distribution of the Ethiopian *Propebrevitrichia*, Neotropical *Irwiniana* and Australian *Riekiella* which show good evidence of a common ancestry.

I would appreciate the loan of any specimens, for examination and identification, particularly from those areas of the world which have been indicated to be without good representation. All material from the family is, however, welcome. Many Scenopinids are small, about 2 mm in length, and must be watched for when collecting.

Table 1. Zoogeographic Distribution of Genera and Species of Scenopinidae.

Genus and Author	Palaearctic	Nearctic	Neotropical	Ethiopian	Oriental	Australian	Total
<i>Scenopinus</i> Latreille							
fenestralis group	13	8(2)	1(2)	2(2)	2(2)	(2)	26
albicinctus group	8(1) <sup>1</sup>	—	(2)	19	4(1)	23	54
brevicornis group	8	—	—	8	1	—	17
velutinus group	(1)	40	11	(1)	—	—	51
sub total	29(2)	48(2)	12(4)	29(3)	7(3)	23(2)	148
<i>Caenoneura</i> Kröber	2	—	—	—	—	—	2
<i>Pseudomphrale</i> Kröber	5	—	—	—	—	—	5
<i>Stenomphrale</i> Kröber	2	—	—	—	—	—	2
<i>Belosta</i> Hardy	—	7	—	—	—	—	7
<i>Brevitrichia</i> Hardy	—	43	2	—	—	—	45
<i>Metatrichia</i> Coquillett	—	1	1	2	1	2	7
<i>Pseudatrichia</i> Osten Sacken	—	37	2	—	—	—	39
<i>Heteromphrale</i> Kröber	—	—	2	—	—	—	2
<i>Irwiniana</i> Kelsey	—	—	3	—	—	—	3
<i>Prepseudatrichia</i> Kelsey	—	—	—	3	—	—	3
<i>Proprebrevitrichia</i> Kelsey	—	—	—	3	—	—	3
<i>Seguyella</i> Kelsey	—	—	—	2	2	—	4
<i>Neopseudatrichia</i> Kelsey	—	—	—	—	—	5	5
<i>Paramonova</i> Kelsey	—	—	—	—	—	10	10
<i>Paratrichia</i> Kelsey	—	—	—	—	—	2	2
<i>Riekiella</i> Paramonov	—	—	—	—	—	12	12
<i>Scenopinula</i> Paramonov	—	—	—	—	—	1	1
	38(2)	136(2)	22(4)	39(3)	10(3)	55(2)	300
Genera and Subgenera	4-3	5-2	6-2	5-3	3-3	7-1	18-4

<sup>1</sup> ( ) species transported in trade *S. fenestralis* (Linnaeus), *S. glabrifrons* Meigen, *S. lucidus* Becker, *S. papuanus* (Kröber) and *S. schulzi* Enderlein.

Probable synonyms. *S. cavifrons* (Kröber), *S. nitidifrons* (Kröber), *S. femoratus* Macquart.